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IN THE CLAIMS

1. (Currently Amended) A process for the reaction of a ketone or an aldehyde with a phenol to form a bisphenol comprising reacting a feed comprising a phenol, water and a ketone or aldehyde ~~and water~~ in the presence of an ion exchange resin catalyst to produce an effluent; determining the *para-para* bisphenol selectivity of the reaction; and adjusting the concentration of the water in the feed based upon the *para-para* bisphenol selectivity

2. (Original) The process of Claim 1, wherein said ketone is acetone and said phenol is a hydroxy aromatic compound with at least one unsubstituted position.

3. (Original) The process of Claim 2 wherein the unsubstituted position is para to the hydroxy position.

4. (Original) The process of Claim 2 wherein the phenol is substituted with at least one inert substituent.

5. (Original) The process of Claim 1, wherein the phenol to ketone mole ratio is about 4 to about 65.

6. (Currently amended) The process of Claim 1, wherein said phenol ~~comprises~~ is selected from the group consisting of phenol, 2-cresol, 3-cresol, 2,6-dimethylphenol, resorcinol, napthol ~~or a~~and mixtures of two or more of the foregoing phenols.

7. (Currently amended) The process of Claim 1, wherein said ketone ~~comprises~~ is selected from the group consisting of 9-fluorenone, benzophenone, acetone, acetophenone, cyclohexanone, 3,3,5-trimethylcyclohexanone, 4-hydroxyacetophenone, 4,4'-dihydroxybenzophenone ~~or a~~and mixtures of two or more of the foregoing ketones.

8. (Currently amended) The process of Claim 1, wherein said ~~ketone~~ aldehyde ~~comprises~~ is selected from the group consisting of formaldehyde, acetaldehyde, propionaldehyde, butyraldehyde ~~or a~~and mixtures of two or more of the foregoing aldehydes.

9. (Original) The process of Claim 1, wherein the reaction has a weight hour space velocity of about 0.1 to about 10.

10. (Original) The process of Claim 1, wherein the feed has a temperature of about 40 to about 90 °C.

11. (Original) The process of Claim 1, wherein the *para/para* selectivity of the reaction is greater than about 94%.

12. (Original) The process of Claim 1, wherein the catalyst has a degree of crosslinking of about 1.5% to about 6.0%.

13. (Original) The process of Claim 12, wherein catalyst is a mixture of resins of different degrees of crosslinking wherein the degree of crosslinking of each resin comprising the mixture is about 1.5 to about 6%.

14. (Original) The process of Claim 1 wherein the catalyst has a degree of neutralization of about 35 to about 60 mole %.

15. (Original) The process of Claim 1, wherein the process has a conversion level greater than or equal to about 70%.

16. (Original) The process of Claim 1, wherein the amount of water in the feed is less than or equal to about 5 weight percent, based on the total weight of the feed.

17. (Original) The process of Claim 1, wherein the catalyst further comprises an attached promoter.

18. (Original) The process of Claim 17, wherein the attached promoter is cysteamine, 4-pyridylethylmercaptan or a combination of the foregoing.

19. (Currently amended) The process of Claim 1, wherein the ketone or aldehyde is added in a single portion.

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20. (Currently amended) The process of Claim 1, wherein the ketone or aldehyde is added in multiple portions.

21. (Original) The process of Claim 1, wherein the feed comprises recycled compounds.

22. (Original) The process of Claim 1, wherein the catalyst further comprises a bulk promoter.

23. (Original) A process for the manufacture of polycarbonate comprising reacting a feed comprising a phenol, a ketone and water in the presence of an ion exchange resin catalyst to produce an effluent comprising bisphenol; determining the *para-para* bisphenol selectivity of the reaction; adjusting the concentration of the water in the feed based upon the *para-para* bisphenol selectivity; and reacting said bisphenol with a carbonic acid derivative or a carbonate diester in the presence of a polymerization catalyst.

24. (Original) A process for the reaction of a ketone with a phenol to form a bisphenol in the presence of a catalyst comprising determining the catalytic activity of the catalyst over time; introducing a feed comprising water; phenol and ketone to the catalyst; reacting the phenol and ketone in the presence of the catalyst; controlling the concentration of the water in the feed based upon the amount of catalyst and catalytic activity; wherein the reaction has a *para-para* bisphenol selectivity of at least about 94%.

25. (Original) A process for the manufacture of polycarbonate comprising

synthesizing a bisphenol in the presence of a catalyst by determining the catalytic activity of the catalyst; introducing a feed comprising water, phenol and ketone to the catalyst; reacting the phenol and ketone in the presence of the catalyst to form bisphenol; controlling the concentration of the water in the feed based upon the amount of catalyst and catalytic activity; and

reacting the bisphenol with a carbonic acid derivative or a carbonic diester in the presence of a polymerization catalyst, wherein the reaction generating bisphenol has a *para-para* bisphenol selectivity of at least about 94%.

26. (Original) A process for the reaction of a ketone with a phenol to form a bisphenol comprising

reacting a feed comprising a phenol, a ketone and a first concentration of water in the presence of an ion exchange resin catalyst at a first flow rate to produce an effluent; and

reacting a feed comprising a phenol, a ketone and a second concentration of water in the presence of the ion exchange resin catalyst at a second flow rate to produce an effluent, wherein the reaction at the first flow rate has a *para-para* bisphenol selectivity within about 1% of the *para-para* bisphenol selectivity of the reaction at the second flow rate and the first concentration of water does not equal the second concentration of water.